

25 Weston Place
London SW
Feb 24/79

you gave out that the four petiolous appendages
of the fruit in both the Japanese & the American
species are bracts for which I should say 2 pairs of
leaves is further confirmed by comparison. Our
female specimens both from N. Amer. and Japan
are all in fruit and I have only been able to
examine one female flower and that one far
advanced. In it the 4 petioles of the terminal
bracts formed very prominent ribs on the tube
below, the fruit becoming nearly equal.

I think these petioles and the venation of the
lamina seem to me to indicate the a uppermost
pair of leaves placed immediately under the
flower with their petioles adnate to it. Petiolate
sepal would be very anomalous.

Next is *Manodea* and especially *Bignonia* where
the stem leaves are alternately scattered
a few of the uppermost are crowded close under
the fruit and one or two of them often adnate
to its base which is some approach to the adnate
floral leaves of *Buckleya*.

Now consider all this and let me know your
revised opinion. This has made a shocking sweep
in calling the bracts of *Croton* a calyx and the disk lobes
of *Cervantesia* petals - they are exactly like those of
Lactuca & both *Cervantesia* and *Lactuca* have
the ovary in the bed almost or entirely free though
as the lower part enlarges it become at length
almost as entirely inferior. This places the
petioles of *Cervantesia* upon the disk instead
of behind it and has not found out that

My dear Gray

Received yesterday yours of the 10th about
Darbyia and *Buckleya*

I finished *Bataleina* about three weeks ago
having carefully examined all the genera and as a
result I find the test of hair at the base of the
perianth lobes behind the anthers a very general
character throughout the order but to a certain degree
variable and of no generic value for while it is
wanting it is generally in some species only of a genus
and in other genera it is in some species, connected
with the anther in others is very small and short,
the disk lining the entire part of many perianths
afford generally good characters here in *Hypolepis*
the anther characters are also pretty constant and
sometimes in flowers even etc. I make three kinds
1. *Hypolepis* with the perianth tube more or less produced
between the ovary & the lobes without any prominent
disk (*Guineanum* *Azorica* *Thermonia* *Theridium* and
Psychedeispar) 2. *Bryocodon* lobes of the perianth divided
to the disk (which sometimes does and sometimes is not
produced beyond the ovary) divided into two groups
+ anthers all parallel opening longitudinally (13 genera to which
& shall presently revert) and 3^o anthers all divergent
some distinct or confluent (*Heuchleria*, *Lobopyrum*

Chonetrum dextromeria (Myrsinaceae) *Sabatia* *boliviensis*
very free with an erect ovule - very near *Bystropogon*
(*Chthamalus* *Epicarpos* and *Champnesia*)

The 13 genera enumerated under the first group of *Oxydorea* are separated by characters of little importance - often more by habit inflorescence or corolla than by floral characters and might be much amalgamated or further divided upon very fair grounds. They are:

+ Disk produced between the stamens into distinct lobes. Often glandular

Ceratandra and *Lodina* from Africa & extratropical South America are remarkable for the adnate perianth-tube showing especially after flowering the prominent somewhat fleshy parts of which it is composed.

Syngularia decolorous Inflorescence terminal female solitary, bracts large & alternate. M. America and Himalaya (*Iphrococcyxa* Wall but not *Belopolygon*)

Iturroa Griseb (Oxalis sp. Rich) from South America Hermaphrodite with peculiar apetalous spikes etc.

Comandra. Hermaphrodite with alternate leaves two distinct sections 1. *Eucomandra* Umbels in the upper axils or terminal 3-5 flowered. Placenta linear. H. ovoid not very succulent crowned by the perianth lobes or 2. Amer. and Europe 2. *Haplocomandra* slender slender axillary 1-3 flowered placenta rather thick fruit globular. very succulent not crowned. *P. lineata* Miers

Santalum Hermaphrodite loc. mostly opposite H. in little branched panicle. Placenta with a long point Indo-Australian region and Pacific islands

+ + disk with an entire or sinuate margin not produced into distinct male-like lobes

a H. mostly hermaphrodite

Insularis (Dr. not others.) is Australian and N. Zealand species forming sections. *Colpoon* (Dr. *Insularis* Mass.) from S. Africa including *Rhoiacarpus*. *Nanodea* from Magellan all with a broad concave disk and imperforate from Chile with a flat disk

b. H. deciduous

Buckleya N. Amer. and Japan with a concave or broadly campanulate disk. *Oxalis* with a flat disk two very distinct sections one European Southern African and Asiatic and *Ornithoglossum* a peculiar Australian genus

According to this plan (judging from a male specimen in my herbarium which you identified as *S. calycina*) *Dasyte* can only come next to *Buckleya* if not in it.

Now as to *Buckleya* you think it may not be Santalaceous, 1^o on account of the deeply imbricate perianth-segments but they are much more distinctly so in one species of *Belopolygon* a tropical Indian genus which is certainly Santalaceous

2^o on account of the supposed double perianth of the female flower, but I think that the operation

what he calls the peculiar squamella in the
inside of the perianth-lobes after flowering
are nothing but the persistent base of the
filaments. If before excluding genera from
Castaliaea he had examined the typical Luteola
and Thecium he would have come to very
different conclusions - The case there is one
particularly instructive from the great
decoynity in their inflorescence perianths
etc. But poor Miers is old and past good
work - I hope somebody will stop me before
I get to that

Baillon has just circulated another digested
attack upon Decaisne - there may be faults on
both sides in the dispute but Baillon is now
repaying Decaisne by his mode of attack &
wrote to him last year to remonstrate strongly
against his proceedings and urging him to
give them up and only got a violently expressed
answer with the greatest abuse of Decaisne.

I have for the last three weeks been
engaged in Loranthus which I keep entire
but divide into 20 sections beside a few
subsections. I shall tomorrow proceed to
Thoraeodendron which I see Lichler divides
into two or three.

I am quite tired of this long cold winter now
returned within these two days in full force
Yours very sincerely George Bentham